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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|-----------------------|---------------------|------------------|
| 10/077,391 | 02/15/2002 | Nikolco S. Nikolovski | 29385-69914 | 4154 |
| 23643 | 7590 | 02/01/2005 | EXAMINER | |
| BARNES & THORNBURG 11 SOUTH MERIDIAN INDIANAPOLIS, IN 46204 | | | TRAN, LEN | |
| | | ART UNIT | | PAPER NUMBER |
| | | 1725 | | |

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|---|----------------------|-------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/077,391 | NIKOLOVSKI ET AL. |
| | Examiner Len Tran | Art Unit 1725 |
| <i>-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --</i> | | |
| Period for Reply | | |
| A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. | | |
| <ul style="list-style-type: none"> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely. - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication. - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b). | | |
| Status | | |
| 1) <input checked="" type="checkbox"/> Responsive to communication(s) filed on <u>01 December 2004</u> . 2a) <input type="checkbox"/> This action is FINAL . 2b) <input checked="" type="checkbox"/> This action is non-final. 3) <input type="checkbox"/> Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213. | | |
| Disposition of Claims | | |
| 4) <input checked="" type="checkbox"/> Claim(s) <u>1-21</u> is/are pending in the application. 4a) Of the above claim(s) _____ is/are withdrawn from consideration. 5) <input type="checkbox"/> Claim(s) _____ is/are allowed. 6) <input checked="" type="checkbox"/> Claim(s) <u>1-21</u> is/are rejected. 7) <input type="checkbox"/> Claim(s) _____ is/are objected to. 8) <input type="checkbox"/> Claim(s) _____ are subject to restriction and/or election requirement. | | |
| Application Papers | | |
| 9) <input type="checkbox"/> The specification is objected to by the Examiner. 10) <input type="checkbox"/> The drawing(s) filed on _____ is/are: a) <input type="checkbox"/> accepted or b) <input type="checkbox"/> objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) <input type="checkbox"/> The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. | | |
| Priority under 35 U.S.C. § 119 | | |
| 12) <input type="checkbox"/> Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) <input type="checkbox"/> All b) <input type="checkbox"/> Some * c) <input type="checkbox"/> None of: 1. <input type="checkbox"/> Certified copies of the priority documents have been received. 2. <input type="checkbox"/> Certified copies of the priority documents have been received in Application No. _____. 3. <input type="checkbox"/> Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. | | |
| Attachment(s) | | |
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | | |
| 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____. | | |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strezov et al (US 5,701,948), and further in view of Tanaka et al (US 4,887,662).

Strezov et al discloses a method of continuously casting a steel strip comprising the steps of providing a chilled casting surface, with a texture, with a casting pool of molten steel having a manganese content of no less than 0.6% by weight, silicon in the range of 0.1 to 0.35% by weight, carbon content less than 0.07% by weight (col. 7, lines

42-51). Strezov et al also discloses wherein the texture have surface distribution of between 5 to 100 peaks per mm square and average height of at least 10 microns to 20 microns (col. 3, lines 7-12).

Strezov et al lacks the disclosure of a random distribution on the rollers.

However, Tanaka et al disclose a random distribution (figure 2, figure 3, figure 12A) for the purpose of preventing cracking (col. 8, lines 33-52).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide random distribution as taught by Tanaka et al, in Strezov et al in order to prevent cracking.

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strezov et al (US 5,701,948), and further in view of Tanaka et al (US 4,887,662), in view of Irie et al (US 4,368,084).

Strezov et al and Tanaka disclose the claimed invention above, but fail to teach the strip are moving away from casting pool at 60 m/min to 75 m/min.

However, Irie et al disclose speed rate of the strip to be rolled at 60 min/m to 80 min/m for the purpose of increasing the productivity of metal strip.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide the speed as taught by Irie et al, in Strezov et al and Tanaka because increasing the productivity of the metal strip allows saving costs and time to the operation.

5. Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strezov et al (US 5,701,948), and further in view of Tanaka et al (US 4,887,662), in view of JP 08294751.

Strezov et al and Tanaka disclose the claimed invention substantially above, but fails to disclose casting surface defined by grit blasted substrate covered by protective coating.

JP '751 discloses casting surface formed by shot blasting or electroplated and covered by a protective coating, such as nickel and chromium for the purpose of providing a thin slab having a smooth surface.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide shot blasting or electroplating method and covered by a protective coating as taught by JP '751, in Strezov et al and Tanaka because a smooth surface on the slab is necessary as the final product.

JP '751 discloses electroplating method, but fails to teach chemical deposition or electrodeposition method as how to apply the protective coating.

However, such method of applying the protective coating would have been obvious to one of ordinary skill in the art at the time applicant's invention was made, since electroplating, chemical deposition, or electrodeposition, were art recognized equivalents for applying the protective coating. Therefore, substituting any of these methods would have been an obvious design choice.

6. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strezov et al (US 5,701,948), in view of Tananka, in view of Irie et al (US 4,368,084) as applied in claim 9, in view of JP 08294751 in view of JP 58-29547.

Strezov et al, Tanaka, Irie et al, and JP '751 disclose the claimed invention substantially above, but fails to disclose coating formed of nickel, chromium, molybdenum, and cobalt.

JP '547 discloses a coating formed of composition consisting of Co, Mo, and Cr, for the purpose of protecting the inner face of the mould.

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide coating composition of JP '547, in Strezov et al, Tanaka, Irie et al, and JP '751 because this allow the inner face of the mold to be protected.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Len Tran whose telephone number is (571) 272-1184. The examiner can normally be reached on M-F, 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Len Tran
Examiner
Art Unit 1725



January 31, 2005